

Appl. No. : 10/768,881
Filed : January 29, 2004

SUMMARY OF INTERVIEW

Applicant would like to thank the Examiner for the telephonic interview conducted on September 29, 2005. The Examiner's comments were helpful, and a summary of the interview appears below.

Exhibits and/or Demonstrations

None

Identification of Claims Discussed

Claims 1, 6, and 15 were discussed.

Identification of Prior Art Discussed

No particular prior art reference was discussed.

Proposed Amendments

Applicant proposed amendments to Claims 1 and 15 directed to the feature that water is directed to the protein skimmer by gravity and suction such that a desired quantity of water is passed through the protein skimmer a plurality of times. Applicant also proposed an amendment to Claim 6 as outlined above.

Principal Arguments and Other Matters

Applicant presented arguments with respect to the failure of the prior art to teach directing water to a protein skimmer by gravity and suction. In particular, Applicant noted that the prior art of record shows movement of water to protein skimmers by way of water mixture and circulation.

Results of Interview

No agreement was reached, as the Examiner stated that a further search of the prior art would be required.

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REMARKS

In the outstanding Office Action, the Examiner has rejected Claims 1-16. Claims 1-3, 5, 6, 9, 12, and 14 have been amended, Claims 15 and 16 have been canceled, and Claims 17-21 have been added. Thus, Claims 1-14 and 17-21 are presented for further examination.

Support for the amendments to the claims appear in Applicant's specification at numbered paragraphs [0027] and [0030], and FIG. 1.

Reconsideration and allowance of all Claims 1-14 and 17-21 in light of the present remarks is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102(b)

The Examiner has rejected Claims 6 and 12-13 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,667,671 to Munsch, et al., U.S. Patent No. 5,910,248 to Tlok, U.S. Patent No. 5,108,594 to Giovanetti, et al., and U.S. Patent No. 4,988,436 to Cole. The Examiner has also rejected Claim 6 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,460,722 to Chen, and Claims 6-7, 10 and 12-14 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,306,421 to Weinstein. In addition, Claims 6-14 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,427,548 to Quick, Jr.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053.

In regard to Claim 6, Applicant respectfully submits that the prior art of record fails to teach "at least one removable drip drawer ... rotatable so as to be removed from said biological chamber in a first direction and a second direction."

Munsch, for example, describes an aquarium integrated filter 10 comprising a chamber 160, and included in the chamber 160 is a drip dispersement plate 170. *Munsch at col. 7, lines 14-16; FIG. 1*. Munsch does not describe, either expressly or inherently, a removable drip drawer that is rotatable as recited in Claim 6.

Tlok describes a water filter wherein water is sprayed onto trickle elements 4 in a sieve-like tub which distributes the flow of water uniformly. *Col. 6, lines 1-6; FIG. 1*. The sieve-like tub, however, is not a "removable drip drawer rotatable" as recited in Claim 6.

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Giovanetti describes an aquarium trickle filter comprising a chamber 12 with a drip tray 20 and biomedial 18. *Col. 3, lines 42-47; FIG. 1.* Giovanetti, however, fails to describe a removable drip drawer that is rotatable as recited in Claim 6.

The filtration system described by Cole includes a trickle plate 41 in a biological chamber 33. *Col. 3, lines 64-68; FIG. 1.* The trickle plate 41, however, is not a removable drip drawer that is rotatable as recited in Claim 6.

Chen describes a biochemical drip board comprising a flat drip board 2 deposited in a filter case A on an aquarium. *Col. 1, lines 62-65; FIG. 1.* Chen fails to describe, however, a removable drip drawer that is rotatable as recited in Claim 6.

Weinstein describes a filter assembly for an aquarium tank, wherein the filter comprises a pre-filter drip plate 31, and a post-filter drip plate 35 supporting a biological filter 36. *Col. 4, lines 30-39.* Neither of the drip plates 31, 35, however, are removable and rotatable as recited in Claim 6.

Quick describes a multi-layer filter-polisher 14 comprising a plurality of filter sections, each comprising a foam filter material and a supporting grate 32. *Col. 4, lines 46-59.* The grates 32, however, cannot appropriately be construed as removable drip drawers that are rotatable as recited in Claim 6.

In regard to Claim 12, Applicant respectfully submits that the prior art of record fails to teach a method of filtering an aquarium, comprising "collecting water from the aquarium and a protein skimmer; filtering said collected water; directing a first portion of said filtered water to the protein skimmer; directing a second portion of said filtered water to the aquarium; [and] directing a third portion of said filtered water to at least one drip drawer in a biological chamber"

In the filter described by Munsch, for example, water flows through four chambers 32, 74, 110, 160, each comprising different types of filtering elements. *See FIGs 3A-B.* Munsch, however, fails to describe filtering water collected from both the aquarium and a protein skimmer, and directing filtered water back to the protein skimmer.

Thus, as the prior art of record fails to teach every element as set forth in each of Claims 6 and 12, Applicant respectfully submits Claims 6 and 12 for further review as patentable subject matter.

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Because Claims 7-11, 13, and 14 depend from Claims 6 and 12, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

The Examiner has also rejected Claims 1-5 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,988,436 to Cole, and Claims 1-4, 15 and 16 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 3,957,017 to Carmignani, et al. Claims 15 and 16 have been canceled.

In regard to Claim 1, Applicant respectfully submits that the prior art of record fails to describe, in a single reference, a filter system for use with an aquarium and a protein skimmer, the filter system comprising "a housing comprising a pre-filter chamber having a pre-filter configured to collect and filter water from both the aquarium and the protein skimmer; and a sump chamber; wherein water is directed from the pre-filter chamber to the sump chamber, and wherein a portion of the water flowing from the pre-filter to through the sump chamber is directed to the protein skimmer by gravity and suction, such that a desired quantity of water is passed through the protein skimmer a plurality of times before being directed to the aquarium."

The aquaculture system described in Carmignani comprises an aquaculture tank 102 and a purifier system 106, wherein water is airlifted from the aquaculture tank 102 to the purifier system 106. *Carmignani at col. 6, lines 3-8, 30-35; FIG. 2.* A screening device 112 is disposed in the aquaculture tank 102 to retain animals in the container while allowing water to be freely transferred through the rest of the system. *Col. 6, lines 21-25.* Water from the aquaculture tank 102 is directed to a first chamber 113 and into the bottom of a biological filter chamber 114. *Col. 6, lines 43-49.* Water that has passed through the biological filter 114 spills over the upper lip 127 of the septum wall 117 between the walls of a protein skimmer chamber 128 and a centrally disposed protein skimmer 129. *Col. 8, lines 51-55.* The water exits the protein skimmer through output line 145, and water from the purifier 106 is returned to the aquaculture tank 102 via return line 149. *Col. 9, lines 9-11.*

Carmignani, however, fails to describe, *inter alia*, a pre-filter configured to collect and filter water from both an aquarium and a protein skimmer, and directing a portion of water

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flowing from a pre-filter back to the protein skimmer by gravity and suction, such that a desired quantity of water is passed through the protein skimmer a plurality of times before being directed to the aquarium. In regard to the protein skimmer, water in Carmignani's purifier system 106 simply spills over from the biological filter 114 into the protein skimmer 129 and is not directed by both gravity and suction.

Cole describes a filtration system 11 comprising an overflow box 13, wherein water flows from an aquarium into the overflow box 13 and to a biological filter chamber 33. *Cole at col. 3, lines 29-32, 42-45; FIG. 1.* A reservoir chamber 77 is located below the biological filter chamber 33, and a protein skimmer 91 is partially immersed within the reservoir chamber 77 with a vertical inlet opening 93 in communication with a biological filter chamber outlet 35. *Col. 4, lines 45-50.* A majority of the water entering the inlet opening 93 is diverted to a remote region 107 of the reservoir chamber 77, wherein the remote region contains a chemical filter medium. *Col. 4, lines 57-68; Col. 5, lines 1-19.* Also, a portion of the water entering the protein skimmer 91 flows to the isolated region 107 of the reservoir chamber. *Col. 5, lines 48-51.* A discharge outlet 89 from the reservoir chamber 77 leads water through conduits back to the aquarium tank. *Col. 5, lines 63-68.*

Thus, Cole fails to describe, *inter alia*, a pre-filter configured to collect and filter water from both an aquarium and a protein skimmer, and directing a portion of water flowing from the pre-filter back to the protein skimmer by gravity and suction, such that a desired quantity of water is passed through the protein skimmer a plurality of times before being directed to the aquarium. In Cole's filtration system, for example, none of the water from the protein skimmer is directed back through the protein skimmer a plurality of times.

Thus, as the prior art of record fails to describe every element as set forth in Claim 1, either expressly or inherently, in a single prior art reference, Applicant respectfully submits Claim 1 for further review as patentable subject matter.

Because Claims 2-5 depend from Claim 1, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

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Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected Claim 5 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 3,957,017 to Carmignani, et al.

Because Claim 5 depends from Claim 1, pursuant to 35 U.S.C. § 112, ¶ 4, it incorporates by reference all the limitations of the claim to which it refers. It is therefore submitted that Claim 5 is in condition for allowance at least for the reasons expressed with respect to the independent claim, and for its other features.

Discussion of New Claims

New Claims 17-21 have been added which recite methods of filtering an aquarium. In particular, independent Claim 17 recites a method of filtering an aquarium, comprising, *inter alia*, "collecting water from an aquarium; directing said water to at least one removable drip drawer in a biological chamber, ... wherein said at least one drip drawer is rotatable so as to be removed from said biological chamber in a first direction and a second direction, wherein the second direction is approximately 180° from the first direction" Applicant respectfully submits that the prior art of record fails to teach every element as recited in new Claim 17, and therefore Claim 17 is submitted as patentable subject matter. As Claims 18-21 depend from Claim 17, Applicant submits that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

Conclusion

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes pursuant to statutory sections 102, and/or 103, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated:

Oct. 5, 2005

By:

Tiffany Miller

Tiffany Miller

Registration No. 52,032

Agent of Record

Customer No. 20,995

(619) 235-8550

1967120
100305